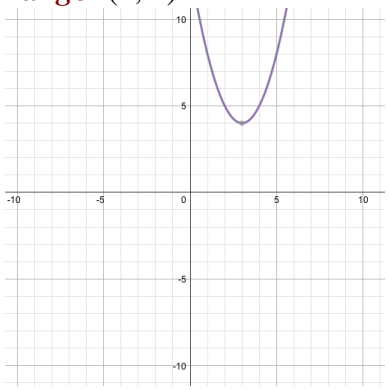
Name: _____ Date: _____ **Unit 3 Homework**

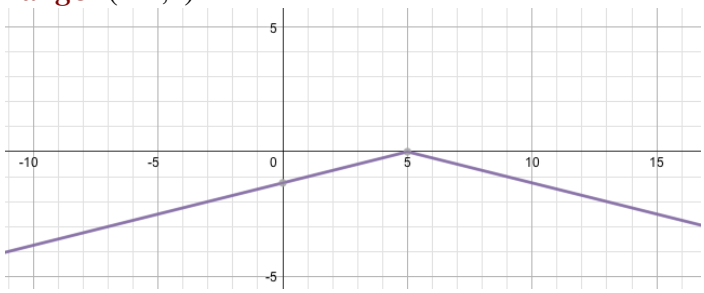
Transformations of Parent Functions Homework

Solutions

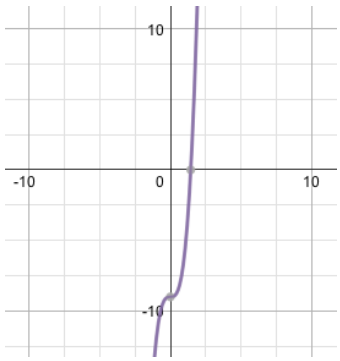
1. Quadratic function shifted to the left 3 and up 4 units
Domain: $(-\infty,\infty)$
Range: $(3,\infty)$



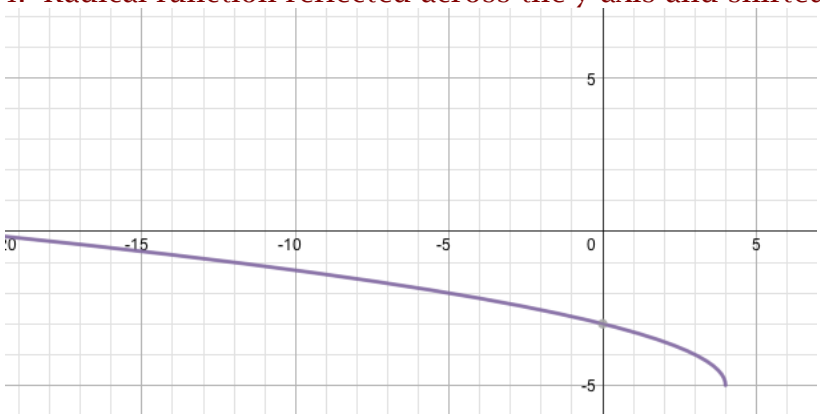
2. Absolute value function stretched by a factor of 4, reflected over the x-axis and y-axis, and shifted five units to the left
Domain: $(-\infty,\infty)$
Range: $(-\infty,0)$



3. Cubic function shrunk by a factor of 3 and shifted 9 units down
Domain: $(-\infty,\infty)$
Range: $(-\infty,\infty)$

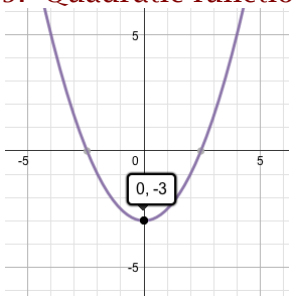


4. Radical function reflected across the y-axis and shifted 4 units left and 5 units down



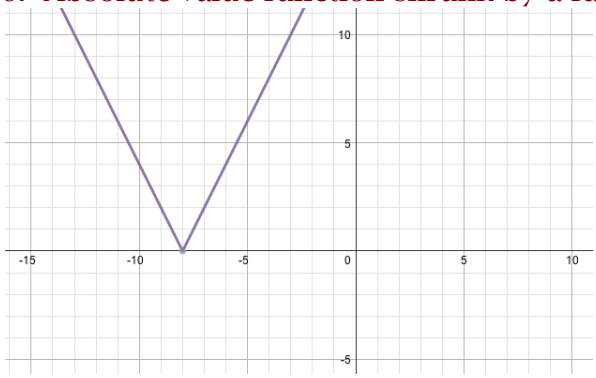
Domain: $(-\infty 4)$
Range: $(-5,\infty)$

5. Quadratic function stretched by a factor of 2 and shifted 3 units down



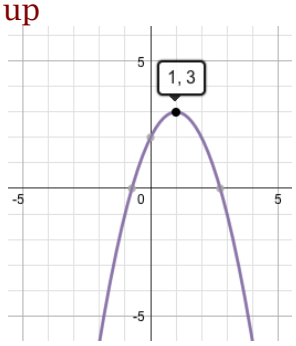
Domain: $(-\infty,\infty)$
Range: $(-3,\infty)$

6. Absolute value function shrunk by a factor of ½ and shifted 8 units to the left



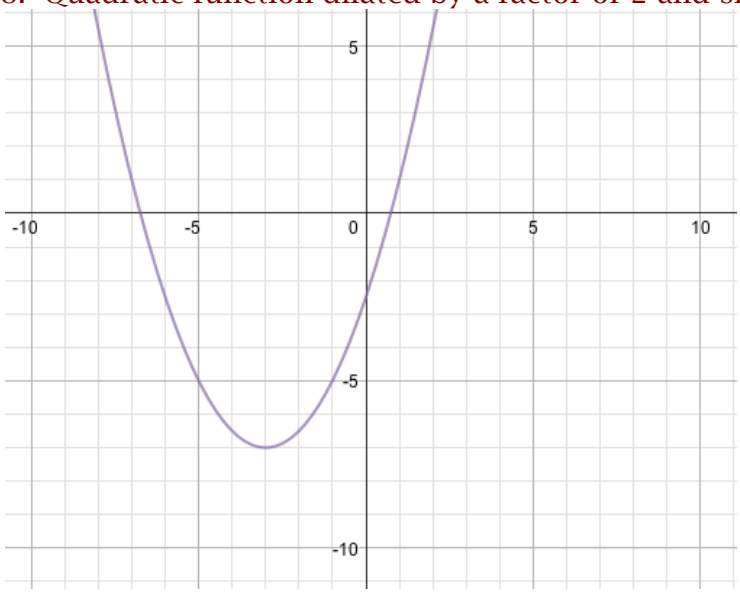
Domain: $(-\infty,\infty)$
Range: $(0,\infty)$

7. Quadratic function reflected across the x-axis, and shifted 1 unit to the right and 3 units up



Domain: $(-\infty,\infty)$
Range: $(-\infty,3)$

8. Quadratic function dilated by a factor of 2 and shifted 3 units to the left and 7 units down



Domain: $(-\infty,\infty)$
Range: $(-7,\infty)$

9. $y = -1/7|x + 2| + 5$
10. $y = 2\sqrt{(-x - 3)} + 4$
11. $y = -5/2(x - 7)^2 - 3$
12. $y = 1/9(-x + 3)^3 + 8$
13. $y = x - 4$